

Serial No. 09/823,777
Page 7 of 12

REMARKS

In the final Office Action mailed April 8, 2005, the Examiner noted that claims 1-10 are pending in the application of which claims 7-9 are allowed and claims 1-6 and 10 are rejected. Claims 1 and 10 are herein amended. Claims 2-9 continue unamended. No new matter has been entered.

In view of the amendments above and the following discussion, the Applicants submit that the claims pending in the application are believed to be allowable under 35 U.S.C. § 102. Thus, the Applicants submit that the application is presently in condition for allowance.

It is to be understood that the Applicants, by amending the claims, do not acquiesce to the Examiner's characterizations of the art of record or to Applicants' subject matter recited in the pending claims. Further, Applicants are not acquiescing to the Examiner's statements as to the applicability of the art of record to the pending claims by filing the instant responsive amendments.

ALLOWABLE SUBJECT MATTER

Applicants thank the Examiner for the allowance of claims 7-9.

REJECTION OF CLAIMS UNDER 35 U.S.C. §102(e)

Claims 1-6 and 10 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,438,652 by Jordan et al. (hereinafter "Jordan"). This rejection is respectfully traversed.

In general, Jordan involves the use of a distributed cache, known as a collection of cooperating cache servers, together with a load balancing monitor to detect and balance overload conditions. In particular, the monitor maintains and shares load condition information with each cache server. As taught in Jordan, the load condition information is computed by the load monitor and identifies cache servers that are capable of handling forwarded requests. Each cooperating cache server services or

Serial No. 09/823,777

Page 8 of 12

forwards the user request in accordance with the load condition information distributed by the load monitor.

Jordan, however, fails to teach or suggest each and every element of Applicants' invention as recited in Independent claim 1. Namely, Jordan fails to teach or suggest at least the limitations of "sending a token from said one of said each NDPS to said another NDPS, wherein said token is adapted for retaining said at least one segment of said media clip in said revised cache layout if said another NDPS possesses a local token for said at least one segment of said media clip; and replacing said at least one segment of said media clip with at least one other segment of at least one other media clip if said another NDPS does not possess said local token for said at least one segment of said media clip". Specifically, Applicants' claim 1 positively recites:

"In a network that includes at least one origin server and a plurality of network distributed proxy servers (NDPS) in communication with said at least one origin server, each NDPS including an associated cache, a method for constructing a revised cache layout of a media clip at each NDPS in accordance with a lazy caching approach and token exchange, the method comprising the steps of:

- (a) receiving rank change information for said media clip from the origin server at said each NDPS;
- (b) determining a revised cache layout responsive to the rank change information at said each NDPS;
- (c) receiving a client request for at least one segment of said media clip at one of said each NDPS;
- (d) returning said at least one requested segment from a cache associated with the one of said each NDPS in the case where a requested segment is stored therein; and
- (e) otherwise, initiating a token exchange with another NDPS that stores the requested segment, wherein the step of initiating a token exchange with another NDPS that caches the requested segment comprises sending a token from said one of said each NDPS to said another NDPS, wherein said token is adapted for:

retaining said at least one segment of said media clip in said revised cache layout if said another NDPS possesses a local token for said at least one segment of said media clip; and

replacing said at least one segment of said media clip with at least one other segment of at least one other media clip if said another NDPS does not possess said local token for said at least one segment of said media clip."

(Emphasis added.)

Serial No. 09/823,777

Page 9 of 12

Jordan, on the other hand, is merely concerned with identifying cache server loading conditions. Jordan fails to teach or suggest that each server in the collection of cooperating cache servers determines a revised cache layout in response to rank change information. Instead, Jordan's servers directly service or forward client requests in accordance with load condition information distributed by the load monitor. Jordan further teaches that a load monitor can decide whether or not to continue shifting some or all forwarded requests from an overloaded cache server to an underloaded cache server. In particular, Jordan teaches that when a request for an object is received, the cache server first checks to see if the requested object can be found locally in its cache. If the object can be found locally, the cache server returns the object and processing ends. If the object cannot be found locally, the cache server determines if the request is a direct request or a forwarded request. If the request is a direct request the request is sent to the load monitor and if the request is a forwarded request the cache server retrieves the object and returns the object to the requesting client. Thus, Jordan merely teaches load balancing between cache servers based on the total volume of requests serviced by the cache servers.

Jordan, however, is completely devoid of any teaching or suggestion of a token, as taught in the Applicants' invention of at least claim 1. Rather, if the requested object is not stored on the server that receives the request for the object, Jordan teaches that the server that receives the request forwards the request to another server "asking it to send a copy of [the] object to [the requesting] server." (Jordan, Col. 7, Lines 40-50). As such, in the Jordan system, the server receiving the request responds to the request by obtaining a copy of the requested object from another server, and then providing the copy to the client device.

As taught in Applicants' claim 1, on the other hand, if an NDPS receiving a request for a segment of a media clip does not have that segment stored locally, the NDPS transmits a token to another NDPS storing the requested segment. Using the token, the NDPS storing the requested segment responds to the requesting client directly, obviating the need to transmit additional copies of the requested segment to the NDPS receiving the request. As such, the retrieval of a copy of a requested object from

Serial No. 09/823,777

Page 10 of 12

another cache server, as taught in Jordan, is simply not a token operable for enabling another server to service a request for a segment directly. Furthermore, since Jordan is completely devoid of any teaching or suggestion of the token exchange of Applicants' invention, Jordan must be completely devoid of any teaching or suggestion of the other functions that may be performed using the token, as taught in Applicants' invention of claim 1.

In particular, Jordan is completely devoid of any teaching or suggestion of retaining at least one segment of a media clip in a revised cache layout if another NDPS possesses a local token for the at least one segment of said media clip. Rather, Jordan merely teaches reassignment of an object from an overloaded cache server to an underloaded cache server in order to perform cache server load balancing. Jordan does not teach tokens, much less the use of tokens for effecting the revised cache layout determined according to rank change information, or for replacing at least one segment of a media clip with at least one other segment of at least one other media clip if another NDPS does not possess a local token for the at least one segment of said media clip. Jordan is completely devoid of any teaching or suggestion of a token, message, packet, or any other message or means for performing the functions of the token as claimed in Applicants' invention of at least claim 1.

As such, Jordan does not teach or suggest the token or the token exchange as taught in Applicants' invention of at least claim 1. As a result, Jordan simply cannot teach or suggest at least the Applicants' claimed limitations of "retaining said at least one segment of said media clip in said revised cache layout if said another NDPS possesses a local token for said at least one segment of said media clip" and "replacing said at least one segment of said media clip with at least one other segment of at least one other media clip if said another NDPS does not possess said local token for said at least one segment of said media clip," as taught in Applicants' invention of at least claim 1. Therefore, at least for the reasons discussed above, Jordan fails to teach, show, or suggest each and every element of Applicants' invention of at least claim 1. As such, the Applicants submit that independent claim 1 is allowable under 35 U.S.C. §102.

Serial No. 09/823,777

Page 11 of 12

Furthermore, the Applicants' remarks presented above with respect to step (e) of claim 1 apply with equal force to the corresponding "means for" clause of independent claim 10. In light of the earlier remarks, it is submitted that the Jordan reference does not teach or suggest each and every element of the system defined by the Applicants in claim 10. Therefore, it is believed that claim 10 is not anticipated by Jordan. Therefore, Applicants respectfully submit that claim 10 is allowable under 35 U.S.C. §102.

As such, the Applicants submit that independent claims 1 and 10 are allowable under 35 U.S.C. §102. Furthermore, dependent claims 2-6 depend, either directly or indirectly, from independent claim 1 and recite additional limitations thereof. Thus, and for at least the same reasons discussed above with respect to claim 1, Applicants submit that these dependent claims are also not anticipated by Jordan and are allowable under 35 U.S.C. §102. Therefore, Applicants respectfully request that the rejections be withdrawn.

Serial No. 09/823,777
Page 12 of 12

CONCLUSION

In view of the foregoing amendments and remarks, Applicants respectfully submit that this application is in condition for allowance. Reconsideration and allowance are respectfully solicited.

If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Eamon J. Wall, Esq. at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

7/5/05

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